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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,430	01/23/2004	Geoffrey B. Rhoads	P0929	6076
23735 7590 09/04/2007 DIGIMARC CORPORATION 9405 SW GEMINI DRIVE BEAVERTON, OR 97008			EXAMINER KRASNIC, BERNARD	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 09/04/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/764,430	Applicant(s) RHOADS, GEOFFREY B.	
	Examiner Bernard Krasnic	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1-23-2004</u>                                                 | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Priority*

1. The current application is not entitled to the benefit of the prior-filed application(s) corresponding to CON 08/508,083 7/27/1995 and PCT/US94/13366 11/16/1994 because the Examiner has not found support for the claimed invention for example of "printed paper being steganographically encoded with plural-bit auxiliary data" and other limitations as claimed in claims 1-8 of the current application. The Examiner has decided that the current application is entitled to the benefit of the prior-filed application(s) corresponding to CON 09/343,104 6/29/1999. **Therefore the current application is entitled to the priority benefit of 05/19/1999 and not 07/27/1995 and not 11/16/1994.** If the Applicant does choose to argue this decision, it is essential that the Applicant clearly point out where the support is found and how the interpretation is being conceived.

### *Specification*

2. The disclosure is objected to because of the following informalities:  
Page 1, line 5: The "Related Application Data" section of the specification is required to disclose all the continuing data for which this application is claiming priority to for example the CIP 10/090,775 03/06/2002, CON of 08/508,083 07/27/1995, PCT/US94/13366 11/16/1994, and etc.

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

4. Claim(s) 1 is/are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claim 1 defines a "computer system comprising using an application program" embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology

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permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed "application program" can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. The limitation "A method of data processing on a computer system comprising: using an application program to compose" is suggested to be -- A method of data processing on a computer-readable medium encoded with a computer program comprising: using the program to compose --. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claims 2-8 are dependent upon claim 1.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stephany (US 5,331,140).

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Re Claim 1: Stephany discloses a method of data processing on a computer system / bar code printing and reading system, comprising using an application program to compose an electronic version of a document (the bar code printing and reading system creates a bar code which represents information providing document identification); printing the document onto paper (the bar code representing the document is printed on a package, mail, or magazine), the printed paper being steganographically encoded with plural-bit auxiliary data (the bar code which is plural-bit auxiliary data is steganographically or invisibly printed, the invisible bar code is not visible to the human eye) (see col. 1, lines 6-11, 23-28, 32-49, 60-64).

Although Stephany fails to specifically disclose storing at least some of the plural-bit auxiliary data in association with data identifying a location at which the electronic version of the document is stored, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have such a feature because any bar code system needs some type of memory storing a library correlating the particular bar code to its particular item to be identified in order to be able to locate the representation and meaning of the bar code when the bar code is read (DeAngelis [US 4,654,482] is one example showing how a bar code read system uses a wand to read a bar code and correlate it to a specific item).

Re Claim 2: Stephany further discloses the printing includes steganographically encoding the printed paper with said plural-bit auxiliary data (see col. 1, lines 6-11, 23-28, 32-49, 60-64, the bar code representing information providing document

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identification is steganographically or invisibly printed on a package, mail, or magazine, the invisible bar printed bar code is not visible to the human eye).

Re Claims 3-6: Although Stephany fails to specifically disclose said storing includes storing in a registry database maintained by an operating system of said computer system, wherein said storing is performed by the application program, said storing is performed by a computer system operating system, or wherein said storing is performed by a printer driver employed in printing the document onto paper, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have such features because any bar code system needs some type of memory [the memory may be a database run by a computer operating system, the memory may be performed by a program within the computer operating system, the memory may be within the driver of the printer itself, etc.] storing a database or library correlating the particular bar code to its particular item to be identified in order to be able to locate the representation and meaning of the bar code when the bar code is read (DeAngelis [US 4,654,482] is one example showing how a bar code read system uses a wand to read a bar code and correlate it to a specific item and showing different means of storage).

Re Claim 7: Stephany further discloses the steganographic encoding of the printed paper comprises subtle variations in the luminance of the document, which are substantially imperceptible to casual human inspection, but which are detectable through visible light imaging of the document and processing of image data thereby

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produced (see col. 1, lines 60-64, col. 3, lines 60-65, UV [ultra violet light] or IR [infrared light] stimulated invisible bar codes could be printed in the extremes of visible light such as near the infrared wavelengths of 780 to 800 nanometers while still being invisible to the casual human eye inspection).

Re Claim 8: Stephany further discloses the steganographic encoding takes the form of tiny elements of ink or toner distributed in a pattern so light as to be essentially unnoticeable (see col. 1, lines 6-11, 23-28, 32-49, 60-64, the printer prints the steganographic or invisible bar code that is invisible to the human eye).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rhoads discloses an identification coding method and apparatus; Johnsen et al discloses a flash imaging and voidable articles; Berson et al discloses a bar code scanner for reading a lower layer luminescent invisible ink that is printed below a upper layer luminescent invisible ink; Berson et al discloses a bar code scanner for reading a visible ink and a luminescent invisible ink; Petegrew et al discloses a bar code printing; Borrer et al discloses an optical storage identification card and read/write system; Wicker discloses a method and apparatus for hiding and viewing halftone images; Cooperman et al discloses a steganographic method and device.

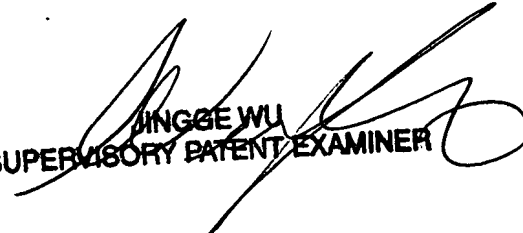


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic  
August 23, 2007

  
JINGGE WU  
SUPERVISORY PATENT EXAMINER